

REMARKS

I. Introduction

The Office Action of September 17, 2009 has been reviewed and the Examiner's comments carefully considered. The present Amendment amends independent claim 8 in accordance with the originally-filed specification and figures. No new matter has been added. More specifically, support for the amendment to independent claim 8 can be found at paragraphs [0010], [0013], [0034], and [0051] of the specification as originally filed, and in FIGS. 2, 9, 11, 14, 15, and 17. Accordingly, claims 8-20 are currently pending in this application, and claim 8 is in independent form.

II. Allowable Subject Matter

The Applicant would like to thank the Examiner for indicating that claims 9-12 and 14-20 are directed to allowable subject matter. Specifically, the Examiner has indicated that claims 9-12 and 14-20 would be allowable if rewritten in independent form including the base claim and any intervening claims. However, since the Applicant considers that independent claim 8, as currently amended, defines patentable subject matter for the reasons set forth hereinafter, claims 9-12 and 14-20 are maintained in dependent form at the present time.

III. 35 U.S.C. §102 Rejection

Claims 8 and 13 stand rejected under 35 U.S.C. §102(b) for anticipation by Japanese Patent Publication No. JP 07-081669 to Hamamoto (hereinafter "the Hamamoto publication"). In view of the following remarks, the Applicant respectfully requests reconsideration of this rejection.

As defined by amended independent claim 8, the present invention is directed to a pipeline closing apparatus that includes a lid member attachable to a downstream end portion of a sluice valve or an end portion of a pipe portion connected thereto. The lid member is adapted to close an end opening of a branch pipe connected to and diverging from a fluid transmitting main and having the sluice valve disposed therein. The pipeline closing apparatus also includes: a cylindrical first control shaft extending through the lid member to be axially slidable in a sealed

condition; a second control shaft extending through the first control shaft to be axially slidable; a first pressing plate attached to an inward end region of the first control shaft; a second pressing plate attached to an inward end region of the second control shaft upstream of the first pressing plate; an elastic annular member disposed between the first pressing plate and the second pressing plate and elastically deformable to a diameter-increased position for tight contact with an inner peripheral surface of the branch pipe by being clamped and pressed between both of the pressing plates from axial directions, thereby blocking the inner peripheral surface and outer peripheral portions of the pressing plates; and a retaining device provided between the inward end region of the second control shaft and the second pressing plate, and including engaging link pairs flexing and bulging to a diameter-increased position to engage with positions upstream of a position blocked by the elastic annular member in response to outward sliding movement of the second control shaft relative to the first control shaft. In the second control shaft, there is provided a reversal preventing device having an elastic correcting member which, when the engaging link pairs of the retaining device are stretched to a diameter-reduced position, contacts and limits the engaging link pairs to an outwardly bent position where flexing pivotal portions of the engaging link pairs project radially outward.

The Hamamoto publication is directed to a branch pipe shielding device provided to release the block of a branch pipe smoothly by a process where the internal pressure of the branch pipe in the downstream side of the block member is made substantially equal to the internal pressure of the branch pipe in the upstream side of the block member. When the block of a branch pipe (B) is to be released, the internal pressure in the upstream and downstream sides of the block member (5B) is made substantially equal. Thus, when the clamping of a resilient ring-shaped member (5f) by pressing plates (5c, 5d) is released, there exists substantially no force derived by the pressure difference of the internal pressure of the branch pipe (B) pressing the pressing plates (5c) in the downstream side of the resilient ring-shaped member (5f) and the inner peripheral wall of the branch pipe (B). In this way, it is easy for the resilient ring-shaped member (5f) to deform by compensation from the reduced diameter condition generating the gap between it and the inner peripheral wall of the branch pipe (B).

The Hamamoto publication does not teach or suggest a reversal preventing device in the second control shaft that has an elastic correcting member provided to contact and limit the engaging link pairs to an outwardly bent position where flexing pivotal portions of the engaging link pairs project radially outward when the engaging link pairs of the retaining device are stretched to a diameter-reduced position as required by amended independent claim 8. The Examiner contends that the pressing operation implement (5e) disclosed in the Hamamoto publication corresponds to the reversal preventing device of amended independent claim 8. However, this pressing operation implement (5e) is provided on an inward end portion of a second operating shaft (5b) for determining a maximum upstream movement position of a second pressing plate (5d) relative to the second operating shaft (5b). There is no teaching or suggestion in the Hamamoto publication that this pressing operation implement (5e) contacts and limits the engaging link pairs to an outwardly bent position where flexing pivotal portions of the engaging link pairs project radially outward when the engaging link pairs of the retaining device are stretched to a diameter-reduced position as required by amended independent claim 8.

In the above respect, the reversal preventing device (F) as required by amended independent claim 8 contacts and limits the engaging link pairs (13, 14) to an outwardly bent position with flexing pivotal portions (S2) of the engaging link pairs (13, 14) protruding radially outward when the engaging link pairs (13, 14) are stretched to a diameter-reduced position. More specifically, in the outwardly bent position, the flexing pivotal connecting points (S2) of the engaging link pairs (13, 14) are positioned to protrude radially outward beyond lines (Y) extending between pivotal connecting points (S1) to the second connecting elements (22) of the mounting tubular member (21) and pivotal connecting points (S3) to the first connecting elements (20) of the second pressing plate (11) (*see* paragraph [0033] and FIG. 2 of the present application).

On the other hand, in the case of the pressing operation element (5e) disclosed in the Hamamoto publication, when the fixing tool (6A) and the link (6c) are stretched to the diameter-reduced posture, the projection (6b) is moved in the direction closer to the second operational shaft (5b) (*i.e.*, radially inward direction), so there is the possibility of the projection (6b) contacting the fixing tool (6A) or the link (6c). However, under this condition, the fixing

tool (6A) and the link (6c) assume the inwardly bent position posture with the projection (6b) protruding radially inward. Therefore, the pressing operation element (5e) is not configured to be capable of constantly contacting and limiting the fixing tool (6A) and the link (6c) to the outwardly bent position (*see* FIG. 2 of the Hamamoto publication).

Accordingly, the pressing operation element (5e) disclosed in the Hamamoto publication more accurately corresponds to the stopper nut (15) and the lock nut (16) provided in the present invention (*see* paragraph [0035] and FIGS. 2 and 9 of the present application) and does not correspond to the reversal preventing means (F) of independent claim 8.

In addition, the Hamamoto publication does not teach or suggest a reversal preventing device that is provided in the second operational shaft as required by amended independent claim 8. By providing a reversal preventing device (F) in the second operational shaft, the present invention prevents inadvertent contacting or hooking of the reversal preventing device with the pipe constituting portion upstream of the blocked position when the engaging link pairs are bent to the diameter-increased position, even if these engaging link pairs come into engagement with positions upstream of a position blocked by the elastic annular member of the retaining device.

Finally, by providing a reverse preventing device (F) having an elastic correcting member which, when the engaging link pairs are stretched to the diameter-reduced position, contacts and limits these engaging link pairs to the outwardly bend position, the pipeline closing apparatus of the present invention is capable of constantly urging the engaging link pairs in the radially outward direction (*i.e.*, the diameter-increasing direction). Further, since the reversal preventing device (F) is provided in the second control shaft and includes an elastic correcting member, it is also possible to alleviate the shock occurring in the event of contact between the engaging link pairs and the elastic correcting member and to prevent generation of noise resulting therefrom.

For the forgoing reasons, the Applicant believes that the subject matter of amended independent claim 8 is not anticipated by the Hamamoto publication. Reconsideration of the rejection of claim 8 is respectfully requested.

Application No. 10/577,787
Paper Dated: December 17, 2009
In Reply to USPTO Correspondence of September 17, 2009
Attorney Docket No. 0388-061269

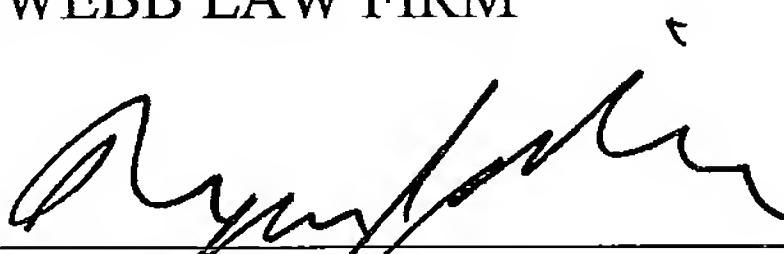
Claim 13 depends from and adds further limitations to amended independent claim 8 and is believed to be patentable for at least the reasons discussed hereinabove in connection with amended independent claim 8. Reconsideration of the rejection of claim 13 is respectfully requested.

IV. Conclusion

Based on the foregoing amendments and remarks, the Applicant respectfully requests allowance of pending claims 8-20. Should the Examiner have any questions, or wish to discuss the application in further detail, the Examiner is invited to contact Applicant's undersigned representative by telephone at 412-471-8815.

Respectfully submitted,

THE WEBB LAW FIRM

By 

Ryan J. Miller
Registration No. 56,236
Attorney for Applicant
436 Seventh Avenue
700 Koppers Building
Pittsburgh, PA 15219
Telephone: (412) 471-8815
Facsimile: (412) 471-4094
E-mail: webblaw@webblaw.com